

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/564,458
Source: IFWP
Date Processed by STIC: 1/20/06

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 01/20/2006

PATENT APPLICATION: US/10/564,458

TIME: 12:19:03

Input Set : A:\21569Y PCT.TXT

Output Set: N:\CRF4\01202006\J564458.raw

4 <110> APPLICANT: Merck & Co., Inc.
 6 <120> TITLE OF INVENTION: POLYPEPTIDES FOR INDUCING A PROTECTIVE
 7 IMMUNE RESPONSE AGAINST STAPHYLOCOCCUS AUREUS
 10 <130> FILE REFERENCE: 21569Y PCT
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/564,458
 C--> 12 <141> CURRENT FILING DATE: 2006-01-11
 12 <150> PRIOR APPLICATION NUMBER: 60/489,840
 13 <151> PRIOR FILING DATE: 2003-07-24
 15 <150> PRIOR APPLICATION NUMBER: 60/520,115
 16 <151> PRIOR FILING DATE: 2003-11-14
 18 <160> NUMBER OF SEQ ID NOS: 107
 20 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 446
 24 <212> TYPE: PRT
 25 <213> ORGANISM: Artificial Sequence
 27 <220> FEATURE:
 28 <223> OTHER INFORMATION: ORF0657n with amino terminus methionine
 30 <400> SEQUENCE: 1
 31 Met Ala Glu Glu Thr Gly Gly Thr Asn Thr Glu Ala Gln Pro Lys Thr
 32 1 5 10 15
 33 Glu Ala Val Ala Ser Pro Thr Thr Thr Ser Glu Lys Ala Pro Glu Thr
 34 20 25 30
 35 Lys Pro Val Ala Asn Ala Val Ser Val Ser Asn Lys Glu Val Glu Ala
 36 35 40 45
 37 Pro Thr Ser Glu Thr Lys Glu Ala Lys Glu Val Lys Glu Val Lys Ala
 38 50 55 60
 39 Pro Lys Glu Thr Lys Glu Val Lys Pro Ala Ala Lys Ala Thr Asn Asn
 40 65 70 75 80
 41 Thr Tyr Pro Ile Leu Asn Gln Glu Leu Arg Glu Ala Ile Lys Asn Pro
 42 85 90 95
 43 Ala Ile Lys Asp Lys Asp His Ser Ala Pro Asn Ser Arg Pro Ile Asp
 44 100 105 110
 45 Phe Glu Met Lys Lys Lys Asp Gly Thr Gln Gln Phe Tyr His Tyr Ala
 46 115 120 125
 47 Ser Ser Val Lys Pro Ala Arg Val Ile Phe Thr Asp Ser Lys Pro Glu
 48 130 135 140
 49 Ile Glu Leu Gly Leu Gln Ser Gly Gln Phe Trp Arg Lys Phe Glu Val
 50 145 150 155 160
 51 Tyr Glu Gly Asp Lys Lys Leu Pro Ile Lys Leu Val Ser Tyr Asp Thr
 52 165 170 175
 53 Val Lys Asp Tyr Ala Tyr Ile Arg Phe Ser Val Ser Asn Gly Thr Lys
 54 180 185 190

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```

55 Ala Val Lys Ile Val Ser Ser Thr His Phe Asn Asn Lys Glu Glu Lys
56      195                      200                      205
57 Tyr Asp Tyr Thr Leu Met Glu Phe Ala Gln Pro Ile Tyr Asn Ser Ala
58      210                      215                      220
59 Asp Lys Phe Lys Thr Glu Glu Asp Tyr Lys Ala Glu Lys Leu Leu Ala
60 225                      230                      235                      240
61 Pro Tyr Lys Lys Ala Lys Thr Leu Glu Arg Gln Val Tyr Glu Leu Asn
62      245                      250                      255
63 Lys Ile Gln Asp Lys Leu Pro Glu Lys Leu Lys Ala Glu Tyr Lys Lys
64      260                      265                      270
65 Lys Leu Glu Asp Thr Lys Lys Ala Leu Asp Glu Gln Val Lys Ser Ala
66      275                      280                      285
67 Ile Thr Glu Phe Gln Asn Val Gln Pro Thr Asn Glu Lys Met Thr Asp
68      290                      295                      300
69 Leu Gln Asp Thr Lys Tyr Val Val Tyr Glu Ser Val Glu Asn Asn Glu
70 305                      310                      315                      320
71 Ser Met Met Asp Thr Phe Val Lys His Pro Ile Lys Thr Gly Met Leu
72      325                      330                      335
73 Asn Gly Lys Lys Tyr Met Val Met Glu Thr Thr Asn Asp Asp Tyr Trp
74      340                      345                      350
75 Lys Asp Phe Met Val Glu Gly Gln Arg Val Arg Thr Ile Ser Lys Asp
76      355                      360                      365
77 Ala Lys Asn Asn Thr Arg Thr Ile Ile Phe Pro Tyr Val Glu Gly Lys
78      370                      375                      380
79 Thr Leu Tyr Asp Ala Ile Val Lys Val His Val Lys Thr Ile Asp Tyr
80 385                      390                      395                      400
81 Asp Gly Gln Tyr His Val Arg Ile Val Asp Lys Glu Ala Phe Thr Lys
82      405                      410                      415
83 Ala Asn Thr Asp Lys Ser Asn Lys Lys Glu Gln Gln Asp Asn Ser Ala
84      420                      425                      430
85 Lys Lys Glu Ala Thr Pro Ala Thr Pro Ser Lys Pro Thr Pro
86      435                      440                      445
89 <210> SEQ ID NO: 2
90 <211> LENGTH: 645
91 <212> TYPE: PRT
92 <213> ORGANISM: S. aureus
94 <400> SEQUENCE: 2
95 Met Asn Lys Gln Gln Lys Glu Phe Lys Ser Phe Tyr Ser Ile Arg Lys
96 1      5      10      15
97 Ser Ser Leu Gly Val Ala Ser Val Ala Ile Ser Thr Leu Leu Leu Leu
98      20      25      30
99 Met Ser Asn Gly Glu Ala Gln Ala Ala Ala Glu Glu Thr Gly Gly Thr
100      35      40      45
101 Asn Thr Glu Ala Gln Pro Lys Thr Glu Ala Val Ala Ser Pro Thr Thr
102      50      55      60
103 Thr Ser Glu Lys Ala Pro Glu Thr Lys Pro Val Ala Asn Ala Val Ser
104 65      70      75      80
105 Val Ser Asn Lys Glu Val Glu Ala Pro Thr Ser Glu Thr Lys Glu Ala
106      85      90      95

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```

107 Lys Glu Val Lys Glu Val Lys Ala Pro Lys Glu Thr Lys Glu Val Lys
108          100          105          110
109 Pro Ala Ala Lys Ala Thr Asn Asn Thr Tyr Pro Ile Leu Asn Gln Glu
110          115          120          125
111 Leu Arg Glu Ala Ile Lys Asn Pro Ala Ile Lys Asp Lys Asp His Ser
112          130          135          140
113 Ala Pro Asn Ser Arg Pro Ile Asp Phe Glu Met Lys Lys Lys Asp Gly
114 145          150          155          160
115 Thr Gln Gln Phe Tyr His Tyr Ala Ser Ser Val Lys Pro Ala Arg Val
116          165          170          175
117 Ile Phe Thr Asp Ser Lys Pro Glu Ile Glu Leu Gly Leu Gln Ser Gly
118          180          185          190
119 Gln Phe Trp Arg Lys Phe Glu Val Tyr Glu Gly Asp Lys Lys Leu Pro
120          195          200          205
121 Ile Lys Leu Val Ser Tyr Asp Thr Val Lys Asp Tyr Ala Tyr Ile Arg
122          210          215          220
123 Phe Ser Val Ser Asn Gly Thr Lys Ala Val Lys Ile Val Ser Ser Thr
124 225          230          235          240
125 His Phe Asn Asn Lys Glu Glu Lys Tyr Asp Tyr Thr Leu Met Glu Phe
126          245          250          255
127 Ala Gln Pro Ile Tyr Asn Ser Ala Asp Lys Phe Lys Thr Glu Glu Asp
128          260          265          270
129 Tyr Lys Ala Glu Lys Leu Leu Ala Pro Tyr Lys Lys Ala Lys Thr Leu
130          275          280          285
131 Glu Arg Gln Val Tyr Glu Leu Asn Lys Ile Gln Asp Lys Leu Pro Glu
132          290          295          300
133 Lys Leu Lys Ala Glu Tyr Lys Lys Lys Leu Glu Asp Thr Lys Lys Ala
134 305          310          315          320
135 Leu Asp Glu Gln Val Lys Ser Ala Ile Thr Glu Phe Gln Asn Val Gln
136          325          330          335
137 Pro Thr Asn Glu Lys Met Thr Asp Leu Gln Asp Thr Lys Tyr Val Val
138          340          345          350
139 Tyr Glu Ser Val Glu Asn Asn Glu Ser Met Met Asp Thr Phe Val Lys
140          355          360          365
141 His Pro Ile Lys Thr Gly Met Leu Asn Gly Lys Lys Tyr Met Val Met
142          370          375          380
143 Glu Thr Thr Asn Asp Asp Tyr Trp Lys Asp Phe Met Val Glu Gly Gln
144 385          390          395          400
145 Arg Val Arg Thr Ile Ser Lys Asp Ala Lys Asn Asn Thr Arg Thr Ile
146          405          410          415
147 Ile Phe Pro Tyr Val Glu Gly Lys Thr Leu Tyr Asp Ala Ile Val Lys
148          420          425          430
149 Val His Val Lys Thr Ile Asp Tyr Asp Gly Gln Tyr His Val Arg Ile
150          435          440          445
151 Val Asp Lys Glu Ala Phe Thr Lys Ala Asn Thr Asp Lys Ser Asn Lys
152          450          455          460
153 Lys Glu Gln Gln Asp Asn Ser Ala Lys Lys Glu Ala Thr Pro Ala Thr
154 465          470          475          480
155 Pro Ser Lys Pro Thr Pro Ser Pro Val Glu Lys Glu Ser Gln Lys Gln

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```

156          485          490          495
157 Asp Ser Gln Lys Asp Asp Asn Lys Gln Leu Pro Ser Val Glu Lys Glu
158          500          505          510
159 Asn Asp Ala Ser Ser Glu Ser Gly Lys Asp Lys Thr Pro Ala Thr Lys
160          515          520          525
161 Pro Thr Lys Gly Glu Val Glu Ser Ser Ser Thr Thr Pro Thr Lys Val
162          530          535          540
163 Val Ser Thr Thr Gln Asn Val Ala Lys Pro Thr Thr Ala Ser Ser Lys
164 545          550          555          560
165 Thr Thr Lys Asp Val Val Gln Thr Ser Ala Gly Ser Ser Glu Ala Lys
166          565          570          575
167 Asp Ser Ala Pro Leu Gln Lys Ala Asn Ile Lys Asn Thr Asn Asp Gly
168          580          585          590
169 His Thr Gln Ser Gln Asn Asn Lys Asn Thr Gln Glu Asn Lys Ala Lys
170          595          600          605
171 Ser Leu Pro Gln Thr Gly Glu Ser Asn Lys Asp Met Thr Leu Pro
172          610          615          620
173 Leu Met Ala Leu Leu Ala Leu Ser Ser Ile Val Ala Phe Val Leu Pro
174 625          630          635          640
175 Arg Lys Arg Lys Asn
176          645
179 <210> SEQ ID NO: 3
180 <211> LENGTH: 569
181 <212> TYPE: PRT
182 <213> ORGANISM: Artificial Sequence
184 <220> FEATURE:
185 <223> OTHER INFORMATION: ORF0657nH with amino terminus methionine
187 <400> SEQUENCE: 3
188 Met Ala Glu Glu Thr Gly Gly Thr Asn Thr Glu Ala Gln Pro Lys Thr
189 1          5          10          15
190 Glu Ala Val Ala Ser Pro Thr Thr Thr Ser Glu Lys Ala Pro Glu Thr
191          20          25          30
192 Lys Pro Val Ala Asn Ala Val Ser Val Ser Asn Lys Glu Val Glu Ala
193          35          40          45
194 Pro Thr Ser Glu Thr Lys Glu Ala Lys Glu Val Lys Glu Val Lys Ala
195          50          55          60
196 Pro Lys Glu Thr Lys Glu Val Lys Pro Ala Ala Lys Ala Thr Asn Asn
197 65          70          75          80
198 Thr Tyr Pro Ile Leu Asn Gln Glu Leu Arg Glu Ala Ile Lys Asn Pro
199          85          90          95
200 Ala Ile Lys Asp Lys Asp His Ser Ala Pro Asn Ser Arg Pro Ile Asp
201          100          105          110
202 Phe Glu Met Lys Lys Lys Asp Gly Thr Gln Gln Phe Tyr His Tyr Ala
203          115          120          125
204 Ser Ser Val Lys Pro Ala Arg Val Ile Phe Thr Asp Ser Lys Pro Glu
205          130          135          140
206 Ile Glu Leu Gly Leu Gln Ser Gly Gln Phe Trp Arg Lys Phe Glu Val
207 145          150          155          160
208 Tyr Glu Gly Asp Lys Lys Leu Pro Ile Lys Leu Val Ser Tyr Asp Thr

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209				165				170				175				
210	Val	Lys	Asp	Tyr	Ala	Tyr	Ile	Arg	Phe	Ser	Val	Ser	Asn	Gly	Thr	Lys
211				180					185				190			
212	Ala	Val	Lys	Ile	Val	Ser	Ser	Thr	His	Phe	Asn	Asn	Lys	Glu	Glu	Lys
213				195				200				205				
214	Tyr	Asp	Tyr	Thr	Leu	Met	Glu	Phe	Ala	Gln	Pro	Ile	Tyr	Asn	Ser	Ala
215		210					215					220				
216	Asp	Lys	Phe	Lys	Thr	Glu	Glu	Asp	Tyr	Lys	Ala	Glu	Lys	Leu	Leu	Ala
217	225					230					235				240	
218	Pro	Tyr	Lys	Lys	Ala	Lys	Thr	Leu	Glu	Arg	Gln	Val	Tyr	Glu	Leu	Asn
219				245					250					255		
220	Lys	Ile	Gln	Asp	Lys	Leu	Pro	Glu	Lys	Leu	Lys	Ala	Glu	Tyr	Lys	Lys
221				260					265					270		
222	Lys	Leu	Glu	Asp	Thr	Lys	Lys	Ala	Leu	Asp	Glu	Gln	Val	Lys	Ser	Ala
223			275					280				285				
224	Ile	Thr	Glu	Phe	Gln	Asn	Val	Gln	Pro	Thr	Asn	Glu	Lys	Met	Thr	Asp
225		290					295					300				
226	Leu	Gln	Asp	Thr	Lys	Tyr	Val	Val	Tyr	Glu	Ser	Val	Glu	Asn	Asn	Glu
227	305					310					315				320	
228	Ser	Met	Met	Asp	Thr	Phe	Val	Lys	His	Pro	Ile	Lys	Thr	Gly	Met	Leu
229				325						330				335		
230	Asn	Gly	Lys	Lys	Tyr	Met	Val	Met	Glu	Thr	Thr	Asn	Asp	Asp	Tyr	Trp
231				340					345				350			
232	Lys	Asp	Phe	Met	Val	Glu	Gly	Gln	Arg	Val	Arg	Thr	Ile	Ser	Lys	Asp
233			355					360				365				
234	Ala	Lys	Asn	Asn	Thr	Arg	Thr	Ile	Ile	Phe	Pro	Tyr	Val	Glu	Gly	Lys
235		370					375					380				
236	Thr	Leu	Tyr	Asp	Ala	Ile	Val	Lys	Val	His	Val	Lys	Thr	Ile	Asp	Tyr
237	385					390					395				400	
238	Asp	Gly	Gln	Tyr	His	Val	Arg	Ile	Val	Asp	Lys	Glu	Ala	Phe	Thr	Lys
239				405						410				415		
240	Ala	Asn	Thr	Asp	Lys	Ser	Asn	Lys	Lys	Glu	Gln	Gln	Asp	Asn	Ser	Ala
241				420					425				430			
242	Lys	Lys	Glu	Ala	Thr	Pro	Ala	Thr	Pro	Ser	Lys	Pro	Thr	Pro	Ser	Pro
243				435				440				445				
244	Val	Glu	Lys	Glu	Ser	Gln	Lys	Gln	Asp	Ser	Gln	Lys	Asp	Asp	Asn	Lys
245		450					455					460				
246	Gln	Leu	Pro	Ser	Val	Glu	Lys	Glu	Asn	Asp	Ala	Ser	Ser	Glu	Ser	Gly
247	465					470				475				480		
248	Lys	Asp	Lys	Thr	Pro	Ala	Thr	Lys	Pro	Thr	Lys	Gly	Glu	Val	Glu	Ser
249				485						490				495		
250	Ser	Ser	Thr	Thr	Pro	Thr	Lys	Val	Val	Ser	Thr	Thr	Gln	Asn	Val	Ala
251				500					505				510			
252	Lys	Pro	Thr	Thr	Ala	Ser	Ser	Lys	Thr	Thr	Lys	Asp	Val	Val	Gln	Thr
253				515				520				525				
254	Ser	Ala	Gly	Ser	Ser	Glu	Ala	Lys	Asp	Ser	Ala	Pro	Leu	Gln	Lys	Ala
255		530					535					540				
256	Asn	Ile	Lys	Asn	Thr	Asn	Asp	Gly	His	Thr	Gln	Ser	Gln	Asn	Asn	Lys
257	545					550					555				560	

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/564,458

DATE: 01/20/2006
TIME: 12:19:04

Input Set : A:\21569Y PCT.TXT
Output Set: N:\CRF4\01202006\J564458.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:57; Xaa Pos. 247

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/564,458

DATE: 01/20/2006

TIME: 12:19:04

Input Set : A:\21569Y PCT.TXT

Output Set: N:\CRF4\01202006\J564458.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:3672 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:3676 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:57
L:3707 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:240